

CLAIMS

What is claimed is:

1. An optoelectronic system comprising:
an optical signal modulator;
an optical input guide and an optical output guide connected to said optical signal modulator;
a reflective optical element in said optical signal modulator, said element disposed to reflect an input light beam incident through said optical input guide into an output light beam through said optical output guide; and
an electrical terminal in said optical signal modulator, said electrical terminal configured such that an electrical signal on said electrical terminal is operable to interact with said input light beam.
2. The system of claim 1 wherein said optical input guide and said optical output guide are a single optical guide.
3. The system of claim 1 wherein said electrical signal is operable to interact to modulate said output light beam.
4. The system of claim 1 wherein said optical signal modulator is an electroabsorption modulator (EAM).
5. The system of claim 4 wherein said input light beam is operable to interact to modulate said electrical signal.
6. The system of claim 4 wherein said electrical signal is operable to interact to modulate said output light beam.
7. The system of claim 4 comprising a plurality of EAMs interconnected electrically in a balanced parallel configuration.
8. The system of claim 1 wherein said electrical terminal is coupled to a voltage source through contacting probe tips.

9. The system of claim 1 wherein said electrical terminal is coupled to a voltage source through non-contacting probe tips.
10. The system of claim 1 wherein said electrical terminal is coupled to a voltage source through an impedance matching network.
11. The system of claim 1 wherein said electrical terminal is coupled to a voltage source through an electromagnetic wave directional coupler.
12. The system of claim 1 wherein said system is operable to deliver a copy of an electrical signal from a remote electrical device to an electronic measurement instrument over an optical fiber.
13. The system of claim 1 wherein said system is operable to deliver a modulated signal over an optical fiber for stimulating a remote electrical device.
14. The system of claim 13 operable concurrently to deliver a copy of an electrical signal over said optical fiber from a remote electrical device to an electronic measurement instrument.
15. A method of remote delivery of a modulated signal, said method comprising:
modulating an input light beam with an electrical signal using optical signal modulation; and
reflecting said modulated light beam into an output light beam direction different from that of said input light beam.
16. The method of claim 15 further comprising concurrently modulating said electrical signal by interacting with said input light beam using electroabsorption modulation.
17. The method of claim 15 further comprising applying a bias voltage concurrently with said electrical signal.
18. The method of claim 15 wherein said output light beam and said input light beam propagate in opposite directions through a single optical fiber.
19. The method of claim 15 wherein said input light beam delivers a replica of an electrical stimulus signal.

20. The method of claim 15 wherein said output light beam delivers a replica of an electrical response signal from a remote electrical device to an electronic measurement instrument.

21. The method of claim 20 wherein said input light beam delivers a replica of an electrical stimulus signal to a remote electrical device.